Powervamp
ADVANCED POWER SOLUTIONS

Portapump

The Portapump unit is a rugged, all-weather fuel pump designed for the rapid fuelling or defuelling of all types of aircraft or vehicles using jet A1 or diesel with a flash point above 37ºC. It is designed to be easily transported by aircraft, helicopter or vehicle. Able to be carried by one man, it uses a powerful 24–28 volt DC motor direct coupled to a high-speed pump with phosphor bronze sliding vanes. The power source can be any 24/28 volt supply such as a portable GPU, vehicle battery or aircraft DC bus. Alternatively a 110/220 volt domestic mains supply can be used with a DC voltage converter.

SPECIFICATION

24/28 volt Portable Fuelling/De-fuelling Pump for aircraft and vehicles
Suitable only for jet A1 and diesel

Aviation/military standard equipment	
Case construction	All-welded stainless steel tubular open space frame
Height 490mm (19in)	Width 360mm (14in)	Depth 330mm (13in)	Weight 27.5kg (61lbs) without hoses and power lead
Power requirement	24–28 volt DC, 14 amps peak. Power lead – 3 metres (10ft) of 4mm (0.16in) twin-core – connects to pump with polarized quick release plug
Switching	On/Off switch, guarded by a 15A pop-out circuit breaker
Filter warning	Indicated by three warning LEDs – Green, Yellow, Red
Static bonding	1000 amp cast brass alligator clips with 5 metres stainless steel bonding wire. Clips to any part of the space frame
Pump	Positive displacement sliding vane pump, giving 100 litres (26.4 gallons) per minute nominal at 1.5 metres (4.9ft) head approx
Pump motor	24V DC – motor 340 watts
Filter performance	Aviation fuel filter system gives clean, filtered fuel to 5 micron filtration with 98% efficiency and water separation to less than 2 parts per million
Filter capacity	Holds 1.1 litres (2.3 pints) of water. Removes up to 0.64kg (1.4lbs) of impurities
Hose (Suction side)	Supplied on suction side with 3 metres (10ft) of 1¼ inch hose, fitted to a 865mm (34in) 2-piece aluminium standpipe for use with standard 200 litre (45 gallon) drums
Hose (Delivery side)	3 metres (10ft) of 1¼ inch pump to nozzle. Delivery nozzle full-flow type with pump automatic cut-off via back pressure operated switch
Couplings	Quick-release 1¼ inch camlock type with protective blanking covers to prevent the ingress of contaminants or residual fuel spillage
Protection	Padded protective transport jacket and hose stowage bag
Nato stock number	NCAGE: KD628 NSN: 2910-99-297-691

FEATURES

- The pump and filter assembly is housed within a stainless steel tubular space frame. All pipework and fittings are alloy or stainless steel with 'Cam-loc' quick release fittings to give rapid connect/disconnect of inlet and outlet hoses
- The Portapump will filter contaminated fuel to 3 microns solids, and 2 parts per million water. Fuel drums or containers that would otherwise require a settling period after transport to allow fuel/water separation can be pumped immediately. Fuel drained from aircraft, vehicles or plant that would otherwise be discarded can safely be re-used once passed though the Portapump.
- Controls comprise three warning LEDs to alert the operator to the status of the system. When fuel flow is shut off at the nozzle by the operator, a 'back pressure' switch automatically switches off the pump, leaving the system in 'standby' mode, indicated by a red warning LED.
- Opening the fuel delivery nozzle causes pressure to drop and the pump to restart, confirmed by green LED. A warning amber LED indicates when the pump is receiving DC power, waiting for the nozzle to be opened to instantly continue fuel delivery. A resettable circuit breaker and internal thermistor protect the pump motor against overload and overheating.
- Pump rotation is protected by an audible alarm that sounds if the 28 volt DC input is connected incorrectly. An inlet non-return valve prevents drain-back (siphoning) and maintains the back pressure to allow activation of the pressure-operated switch that shuts off the pump motor.
- A non-return valve and coarse filter are mounted in a unique detachable cartridge which can be removed for inspection without tools.
- Filter status is indicated by the differential pressure gauge mounted on the stainless steel control panel. Normal pumping is indicated by a reading of approximately 5 PSI on the gauge. Progressive filter blocking is indicated by a gradual rise in differential pressure. At approximately 15 PSI the coalescer filter cartridge should be removed and replaced if necessary. A drain tap is fitted to allow any collected water to be removed daily.

OPTIONAL EXTRAS

- Digital fuel flow meter on output line
- 110/220 volt 50/60Hz to 24–28 volt DC waterproof power converter
- 12 volt pump motor (factory fitted)
- 24 volt Powervamp Power Pack/portable GPU
- Trolley for ramp operations

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